

1637 / DPW

Patent

Attorney Docket No. 1034123-000150

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

James T. Kadonaga et al.

Application No.: 10/516,982

Filing Date: June 21, 2005

Title: METHODS FOR PROMOTING
HOMOLOGOUS RECOMBINATION

) **MAIL STOP Amendment**

) Group Art Unit: 1637

) Examiner: TERESA E STRZELECKA

) Confirmation No.: 1391

AMENDMENT/REPLY TRANSMITTAL LETTER

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Enclosed is a reply for the above-identified patent application.

- ☐ A Petition for Extension of Time is enclosed.
- ☐ _____ Terminal Disclaimer(s) and the ☐ \$ 65 ☐ \$ 130 fee per Disclaimer due under 37 C.F.R. § 1.20(d) are enclosed.
- ☒ Also enclosed is/are: Return Receipt Postcard
- ☒ Small entity status is hereby claimed.
- ☐ Applicant(s) requests continued examination under 37 C.F.R. § 1.114 and enclose the ☐ \$ 395 ☐ \$ 790 fee due under 37 C.F.R. § 1.17(e).
- ☐ Applicant(s) requests that any previously unentered after final amendments not be entered. Continued examination is requested based on the enclosed documents identified above.
- ☐ Applicant(s) previously submitted _____ on _____ for which continued examination is requested.
- ☐ Applicant(s) requests suspension of action by the Office until at least _____, which does not exceed three months from the filing of this RCE, in accordance with 37 C.F.R. § 1.103(c). The required fee under 37 C.F.R. § 1.17(i) is enclosed.
- ☐ A Request for Entry and Consideration of Submission under 37 C.F.R. § 1.129(a) (1809/2809) is also enclosed.

- ☒ No additional claim fee is required.
- ☐ An additional claim fee is required, and is calculated as shown below:


AMENDED CLAIMS					
	No. of Claims	Highest No. of Claims Previously Paid For	Extra Claims	Rate	Additional Fee
Total Claims	31	31	0	x \$ 50 (1202)	\$ 0
Independent Claims	3	3	0	x \$ 200 (1201)	0
<input type="checkbox"/> If Amendment adds multiple dependent claims, add \$ 360 (1203)					\$ 0
Total Claim Amendment Fee					\$ 0
<input type="checkbox"/> Small Entity Status claimed - subtract 50% of Total Claim Amendment Fee					0
TOTAL ADDITIONAL CLAIM FEE DUE FOR THIS AMENDMENT					\$ 0

- ☐ Charge _____ to Deposit Account No. 02-4800 for the fee due.
- ☐ A check in the amount of _____ is enclosed for the fee due.
- ☐ Charge _____ to credit card for the fee due. Form PTO-2038 is attached.
- ☒ The Director is hereby authorized to charge any appropriate fees under 37 C.F.R. §§ 1.16, 1.17 and 1.20(d) and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 02-4800. This paper is submitted in duplicate.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY LLP

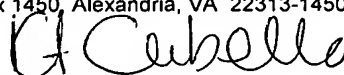
Date June 26, 2007

By: 
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Date of Deposit June 26, 2007


Typed Name: Kim A. Cabello



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

James Kadonaga et al.

Application No.: 10/516,982

Filed: June 21, 2005

For: METHOD FOR PROMOTING
HOMOLOGOUS RECOMBINATION

) **MAIL STOP AMENDMENT**

) Group Art Unit: 1637

) Examiner: Teresa Strzelecka

) Confirmation No.: 1391

) Certificate of Mailing

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) United States Postal Service on June 26, 2007, as first class
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) By: 

) Kim A. Cabello

RESPONSE TO RESTRICTION REQUIREMENT

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

In complete response to the Office Communication dated June 12, 2007, Applicants submit herewith the following response.

Claims 1-30 are pending. In the Office Communication, the Examiner sets forth a restriction requirement among two (2) groups of the claims. In response, Applicants hereby elect with traverse the claims of Group I (claims 1-21 and 30), which are drawn to methods of promoting homologous recombination.

Further, the Examiner sets forth an election of species requirement among six (6) sets of species comprising nineteen (19) allegedly patentably distinct species designated A through S. In response, Applicants hereby elect *with traverse* the species designated A, D, F, H, K, and R. Applicants note that this election is for purposes of searching only. The Examiner is reminded that even where a provisional election of a single species is proper prior to examination on the merits, following election the Markush-type claim should be examined fully with respect to the elected species and further to the extent necessary to determine patentability. (MPEP 803.02). The MPEP requires that should no prior art be

found that anticipates or renders obvious the elected species, the search of the Markush-type claim will be extended to non-elected species. (Id., emphasis added).

Reasons to reconsider and withdraw restriction requirement

Applicants respectfully request the Patent Office to reconsider and to withdraw the restriction requirement for the following reasons. Under M.P.E.P § 803, a restriction is proper if the subject matter can be restricted into one of two or more claimed inventions, and these inventions are either independent (M.P.E.P § 806.04) or distinct (M.P.E.P § 806.05). However, the second element for a restriction requirement to be proper is that if the search and examination of an entire application can be made without serious burden, the examiner must examine the entire application on the merits, even though it includes claims to independent and distinct inventions. Additionally, under M.P.E.P § 816, "[t]he particular reasons relied on by the examiner for holding that the inventions are either independent or distinct should be concisely stated. A mere statement of conclusion is inadequate."

Applicants respectfully assert that the inventions of Groups I and II should be rejoined and examined together. The inventions of Groups I and II relate to methods which use or comprise factors that facilitate homologous recombination. Whether the recombination event occurs in vivo or in vitro is of little relevance in examining the claimed methods because the factors used in each instance are similar. Accordingly, Groups I and II share the same corresponding technical feature as to form a single inventive concept.

Further, Applicants respectfully assert that the six (6) sets of species containing nineteen (19) allegedly patentably distinct species should be examined together. Claims 1-30 relate to methods for promoting homologous recombination between nucleic acid sequences. These interactions are facilitated by molecules such as Rad51 and Rad54. The recombination events can occur in vivo or in vitro. The nucleic acid sequences which undergo recombination can be found in the coding region of a gene or in the promoter sequence of a gene. Applicants submit that all of the alleged species can be searched simultaneously without imposing an undue burden on the Examiner. For example, it is unclear to the Applicants how one could conduct a search for a "promoter" target sequence (i.e., the species designated "L" in the set entitled "Species of the target sequence") without necessarily performing a search for an "enhancer" target sequence (i.e., the species designated "M" in the set entitled "Species of the target sequence").

Thus, Applicants submit that all of pending claims 1-30 and associated species can be searched simultaneously, and that a duplicative search, with possibly inconsistent results, may occur if the restriction requirement is maintained. Applicants submit that any nominal burden placed upon the Examiner to search accordingly to determine the art relevant to Applicants' overall invention is significantly outweighed by the public's interest in not having to obtain and study many separate patents in order to have available all of the issued patent claims covering Applicants' invention. The alternative is to proceed with the filing of multiple applications, each consisting of generally the same disclosure, and each being subjected to essentially the same search, perhaps by different Examiners on different occasions. This process would place an unnecessary burden on both the Patent and Trademark Office and on the Applicants.

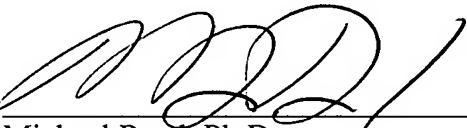
Applicants respectfully request reconsideration of the restriction requirement, withdrawal of the election of species requirement. Applicants have no intention of abandoning any non-elected subject matter and should it be necessary, Applicants expressly reserve the right to file one or more continuation and/or divisional applications directed to non-elected subject matter.

The Examiner is invited to contact the undersigned at the below-listed telephone number, if it is believed that prosecution of this application may be assisted thereby.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY LLP

Date: June 26, 2007

By: 
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